

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/615,169	YEH ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thuy V. Tran	2821	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07/07/2003.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

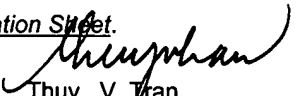
\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 090504.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input checked="" type="checkbox"/> Other <u>See Continuation Sheet</u>.</li> </ol> |
|--|---|

  
 Thuy V. Tran  
 Examiner  
 Art Unit: 2821

### **DETAILED ACTION**

This is a response to the Applicants' filing on July 7<sup>th</sup>, 2003. In virtue of this filing, claims 1-20 are currently presented in the instant application.

#### ***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

This Examiner's Amendment is made to purposefully correct (1) the typographical errors in claims 1, 8, and 14 and thus to improve antecedent basis without changing the scope of the claims that were originally filed, and (2) the directions of the arrows indicated in Fig. 1. to properly characterize the claimed invention. It includes:

#### ***In the claims:***

*Claim 1, line 8, change "the" to --an--;*

*Claim 1, line 16, change "the" (second occurrence) to --an--;*

*Claim 8, line 9, change "the" to --an--;*

*Claim 8, line 28, change "the" (second occurrence) to --an--;*

*Claim 14, line 12, change "the" to --an--;*

*Claim 14, line 21, change "the" (first occurrence) to --an--;*

#### ***In the drawings:***

*Fig. 1:*

*change the arrow toward the timing circuit to toward the start-up circuit; and*

*change the arrow toward the sensing circuit to toward the timing circuit.*

***Allowable Subject Matter***

2. Claims 1-20 are allowed.

***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance:

Prior art fails to disclose or fairly suggest:

- A discharge lamp circuit for ignition time control and over-voltage protection comprising a timing circuit, controlled by the sensing circuit, for developing a threshold voltage at an end of a predetermined period, thereby controlling an ignition time of the drive circuitry, and a start-up circuit for allowing the drive circuitry to keep on applying the strike voltage for the ignition time in order to start the discharge lamp before the threshold voltage developed, and for causing the drive circuitry shutdown if the sensing circuit detects an absence of the lamp current, in combination with the remaining claimed limitations as called for in independent claim 1 (claims 2-7 are allowed since they are dependent on claim 1);
- A discharge lamp circuit for ignition time control and over-voltage protection comprising a timing circuit for developing a threshold voltage at an end of a predetermined period, comprising: a resistor; and a capacitor coupled to the sensing circuit and coupled to the resistor at a node where a node voltage is developed; wherein the node voltage reaches the threshold voltage at the end of the predetermined period determined by the capacitor's value and the resistor's value, thereby controlling an ignition time of the drive circuitry; and a start-up circuit comprising a first transistor coupled to the node of the timing circuit, wherein the first

transistor is in a first state before the node voltage is developed into the threshold voltage thereby allowing the drive circuitry to keep on applying the strike voltage for the ignition time in order to start the discharge lamp, and the first transistor is in a second state when the sensing circuit detects an absence of the lamp current and the threshold voltage is developed at the end of the predetermined period, in combination with the remaining claimed limitations as called for in independent claim 8 (claims 9-13 are allowed since they are dependent on claim 8); and

- A display having functions of ignition time control and over-voltage protection comprising a timing circuit, controlled by the sensing circuit, for developing a threshold voltage at an end of a predetermined period, thereby controlling an ignition time of the drive circuitry, and a start-up circuit for allowing the drive circuitry to keep on applying the strike voltage for the ignition time in order to start the discharge lamp before the threshold voltage developed, and for causing the drive circuitry shutdown if the sensing circuit detects an absence of the lamp current, in combination with the remaining claimed limitations as called for in independent claim 14 (claims 15-20 are allowed since they are dependent on claim 14).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Citation of relevant prior art*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Canova (U.S. Patent No. 6,194,842) discloses a supply circuit for discharge lamps with overvoltage protection.

Prior art Shone et al. (U.S. Patent No. 6,160,362) discloses an ignition scheme for a HID lamp.

Prior art Giannopoulos et al. (U.S. Patent No. 6,008,590) discloses an integrated control device for powering a lamp or a load.

Prior art Chang et al. (U.S. Patent No. 5,781,418) discloses a power supply circuit for discharge lamps.

Prior art Garbowics et al. (U.S. Patent No. 5,070,279) discloses a lamp ignitor with automatic shut-off feature.

Prior art Oda et al. (U.S. Patent No. 5,068,570) discloses a lamp lighting circuit with an overload protection capability.

Prior art Cockram (U.S. Patent No. 4,914,356) discloses a controller for gas discharge lamps.

Prior art Tarroux (U.S. Patent No. 4,665,346) discloses a starting control circuit for a high-pressure lamp.

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***Inquiry***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuy V. Tran  
Examiner  
Art Unit 2821

09/05/2004

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written over the printed name and title.